



Virtual NASA Sounder Science Team Meeting Agenda

(Times indicated are Pacific time)

Weather & Climate Session 1

Chair: Eric Fetzer

Friday, October 2, 2020

Time (PDT)	Name	Affiliation	Title
9:00 AM	Joao Teixeira	NASA JPL	Introduction and status of the NASA Sounder Science Team
9:15 AM	Claire Parkinson	NASA GSFC	Aqua Status
9:30 AM	Jack Kaye	NASA HQ	NASA Headquarters Perspective
9:45 AM	Tom Pagano	NASA JPL	AIRS Status
9:55 AM	Chris Barnet	STC	CLIMCAPS Status
10:05 AM	Ruth Monarrez	NASA JPL	Current highlights and status of the NASA SNPP/JPSS Sounder SIPS: where we are today
AM Break: 10:15-10:30			
10:30 AM	George Aumann	NASA JPL	Wild fire detection with AIRS
10:45 AM	Oreste Reale	USRA / NASA GSFC	Impact of assimilating multi-instrument hyperspectral infrared cloud-cleared radiances on hurricanes Harvey, Irma and Maria during the 2017 Atlantic season
11:00 AM	Brian Kahn	NASA JPL	Enhancing the time dimension of hyperspectral infrared soundings within the convective environment
11:15 AM	Linette Boisvert (McPartland)	NASA GSFC	Evaporation from the Southern Ocean based on AIRS data
11:30 AM	Kathleen Schiro	U. Virginia	Environmental controls on tropical mesoscale convective system precipitation intensity

End of Session: 11:45 AM



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Weather & Climate Session 2

Chair: Eric Fetzer

Monday, October 5, 2020

Time (PDT)	Name	Affiliation	Title
9:00 AM	Claudia Stubenrauch	Sorbonne Université	Cloud properties from AIRS and IASI: Climate Applications and Synergies
9:25 AM	Xu Liu	NASA LaRC	Deriving Weather and Climate Products from NASA IR Sounders using Single FOV Retrieval and Spectral Fingerprinting Methods
9:40 AM	Larrabee Strow	UMBC	AIRS/CrIS Radiometric Stability Improvements Needed for the CHIRP Hyperspectral Infrared Radiance (Climate Data Record)
AM Break: 9:55 - 10:10			
10:10 AM	Larrabee Strow	UMBC	Gridded Anomaly Retrievals for Climate Trending
10:25 AM	Larrabee Strow	UMBC	A Statistical Cloud Fraction and Trends from AIRS: Comparison to AIRS L3, MODIS, VIIRS, and PATMOS
10:40 AM	Xianglei Huang	U. Michigan	A synergistic use of hyperspectral sounding and broadband radiometric observations from S-NPP and Aqua
10:55 AM	Baijun Tian / Thomas Hearty	NASA JPL / NASA GSFC	Estimating and Removing the Sampling Biases of the AIRS Obs4MIPs V2 Data
End of Session: 11:10 AM			



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Level 1 and Calibration

Chair: Steve Broberg

Tuesday, October 6, 2020

Time (PDT)	Name	Affiliation	Presentation
9:00 AM	Steve Broberg	NASA JPL	AIRS Operations, Calibration, and Extended Mission Update
9:20 AM	Chris Wilson	Raytheon / NASA JPL	Understanding the possible effect of scan mirror contamination in the AIRS Instrument
9:40 AM	Igor Yanovsky	NASA JPL	AIRS Point Spread Function reconstruction using AIRS and MODIS data
10:00 AM	Tom Pagano	NASA JPL	Version 7 Level 1B Radiometric Calibration Updates
AM Break: 10:20 - 10:30			
10:30 AM	Joe Taylor	U. Wisconsin	The CrIS Level 1B version 3 Product: Status and Assessment
10:50 AM	Dave Tobin	U. Wisconsin	Long Term Radiometric Comparisons of CrIS and VIIRS, and the CrIS/VIIRS IMG Product
11:10 AM	Howard Motteler	UMBC	Implementation and Overview of the CHIRP Radiance Product
11:30 AM	Chris Hepplewhite	UMBC	CHIRP Radiance Corrections/Offsets Connecting AIRS, SNPP, JPSS-1, and IASI
End of Session: 11:50 AM			



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Retrievals & Validation Session

Chair: Bjorn Lambrigtsen

Thursday, October 8, 2020

Time (PDT)	Name	Affiliation	Presentation
9:00 AM	Nadia Smith	STC	CLIMCAPS in the public eye – what do the retrieval products mean?
9:20 AM	Bill Irion	NASA JPL	Single footprint retrievals from AIRS
9:40 AM	Mathia Schreier	NASA JPL	Looking into the Information Content of the “Retrieval System for Microwave Sounders in Earth Science” (RAMSES-II)
10:00 AM	Murty Divakarla	NOAA	NUCAPS Atmospheric Sounding Product System for JPSS-CrIS and MetOp-IASI Hyperspectral Sounders: Products, Performance, and Recent Advances
10:20 AM	Yong-Keun Lee	U. Maryland, NOAA	MiRS: Recent Developments and Evaluation of TPW from SNPP and NOAA-20 ATMS
AM Break: 10:40 - 10:50			
10:50 AM	Sun Wong	NASA JPL	Comparison of CLIMCAPS-Aqua and AIRS V7 temperature and humidity retrievals for 2003 European heatwave
11:10 AM	Tao Wang	NASA JPL	Evaluate the CLIMCAPS-SNPP and CLIMCAPS-JPSS1
11:30 AM	Timothy Wagner	U. Wisconsin	Evaluation of hyperspectral sounder performance using airborne observations
11:50 AM	Chris Hepplewhite	UMBC	Radiative Transfer Algorithm Updates
12:10 PM	David Santek	U. Wisconsin	Comparison and validation of AIRS 3D winds with Aeolus winds in the polar regions

End of Session: 12:30 PM



Virtual AIRS NASA Sounder Science Team Meeting Agenda

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Atmospheric Composition

Chair: Nadia Smith

Tuesday, October 13, 2020

Time (PDT)	Name	Affiliation	Presentation
9:00 AM	Nadia Smith	STC	Session introduction and overview
9:05 AM	Kelley Wells	U. Minnesota	Global isoprene measurements from CrIS constrain emissions and atmospheric oxidation
9:30 AM	Julieta Calahorrano	CSU	Evolution of PAN in wildfire smoke plumes detected by the Cross-Track Infrared Sounder (CrIS) over the western US during summer 2018
9:45 AM	Robert Herman	NASA JPL	HDO/H ₂ O from AIRS: an update
10:00 AM	Brad Pierce	U. Wisconsin	An assessment of the value of IR sounder trace gas retrievals in chemical data assimilation
10:25 AM	Kazuyuki Miyazaki	NASA JPL	Updated tropospheric chemistry reanalysis and emission estimates using long-term sounder composition records
10:40 AM	Lesley Ott	NASA GSFC	Assimilating trace gas retrievals in NASA's GEOS modeling system
10:55 AM	Nadine de Bruyn	Carleton U.	Preliminary analysis of CLIMCAPS CO

AM Break: 11:00 - 11:10

11:10 AM	Leonid Yurganov	UMBC	Winter-time methane over the Arctic: AIRS, IASI, and CrIS data
11:20 AM	Irina Petropavlovskikh	NOAA ESRL	Spatial and temporal variability in atmospheric composition from CLIMCAPS and NUCAPS: the view from the ground
11:45 AM	Nadia Smith	STC	CLIMCAPS O ₃ retrieval information content
11:50 AM	Alexander Ruzmaikin	NASA JPL	AIRS CO ₂ v6 over Mauna Loa
12:00 PM	Gregory Frost	NOAA ESRL	Applications of long-term trace gas retrievals from sounders

Questions and Discussion 12:25 PM

End of Session: 12:30 PM



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Applications

Chair: Sharon Ray

Thursday, October 15, 2020

Time (PDT)	Name	Affiliation	Presentation
9:00 AM	Sharon Ray	NASA JPL	AIRS Applications Overview & Status, with updates and plans for Volcanic Plume Detection
9:20 AM	Alireza Farahmand	NASA JPL	Drought Cascades in the Hydrologic Cycle: A Set of Case Studies from Remote Sensing
9:45 AM	Erika Duran	UAH / NASA MSFC	Observing the Tropical Cyclone Diurnal Cycle using NUCAPS Satellite Sounding Retrievals
10:10 AM	Emily Berndt	NASA MSFC	Satellite Sounding Retrievals in Operational Weather Forecasting: Emerging Capabilities and Applications
10:35 AM	Jeff Szkodzinsky	STC	Soundings in real-time weather forecasting

End of Session: 11:00 AM



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Planetary Boundary Layer

Chair: Joao Teixeira

Friday, October 16, 2020

Time (PDT)	Name	Affiliation	Title
9:00 AM	Joao Teixeira	NASA JPL	NASA PBL Incubation Study Team: Summary and Updates
9:15 AM	Gregory Elsaesser	NASA GISS	Investigation of the Localized PBL Cooling Signature Associated with Deep Convection
9:30 AM	Feng Ding	NASA GSFC	PBL Heights from AIRS Version 7 & 6, COSMIC Radio Occultation, and MERRA-2 products in GES DISC, and their 10-year Mean Intercomparisons
9:45 AM	Chris Wilson	Raytheon / NASA JPL	An overview of IR information Content for various Large Eddy Simulations of the PBL
10:00 AM	Yanqiu Zhu	NASA GSFC	The PBL-focused data assimilation in the GMAO GEOS global system
10:15 AM	Adam Milstein	MIT Lincoln Lab	Performance of Neural Network-Informed Retrievals in the Boundary Layer
AM Break: 10:30 - 11:00			
11:00 AM	Chi Ao	NASA JPL	Benefits of Joint GNSS Radio Occultation and Passive Microwave Sounder Retrievals for PBL Remote Sensing
11:15 AM	David Loveless	U. Wisconsin	Supplementing Space-based Sounding with Ground-based Sensors to Improve Monitoring of the Planetary Boundary Layer
11:30 AM	Brian J. Carroll	NASA LaRC	Differential Absorption Lidar for Profiling Water Vapor within and above the PBL
11:45 AM	Richard Roy	NASA JPL	Prospects for profiling water vapor in PBL clouds and precipitation with differential absorption radar
12:00 PM	David Emmit	Simpson Weather Assoc	Describing the Marine Atmospheric Boundary Layer using Airborne Doppler Wind Lidar observed backscatter and turbulence
12:15 PM	John Cooney	NASA LaRC	High Precision and Resolution PBL Wind Observations from Coherent Doppler Wind Lidar

End of Session: 12:30 PM